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ABSTRACT

A deaf, profoundly retarded institutionalized 20-year-old, who engaged in mattress ripping, was required to participate in forced practice behavioral training. Repeatedly physically guided through ripping mattresses, he was given the aversive consequence of a squirt of tabasco sauce solution. After 5 weeks of intensive behavioral training and a 3 month followup, the resident's frequency of ripping mattresses remained at zero for 6 consecutive weeks during the followup phase. Results indicated that forced practice can be effective in intervening with low frequency, high intensity, surreptitious behavior. (Author/CL)

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Decreasing Mattress Ripping Using Forced Practice

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Decreasing Mattress Ripping Using Forced Practice

Abstract

Property destruction is a frequently occurring problem with institutionalized mentally retarded persons. Surreptitious low freqency incidents may pose a serious problem due to their intensity. One form of property destruction, mattress ripping became extremely problematic when exhibited by a deaf, profoundly retarded resident. In order to increase the potential effectiveness of an aversive consequence the resident was required to participate in forced practice behavioral training. He was repeatedly physically guided through ripping mattresses and the aversive consequence of a tabasco squirt solution applied. The results indicate that forced practice can be effective in programming low frequency, high intensity, surreptitious behavior.

Property destruction is a frequently occuring problem with institutionalized mentally retarded persons resulting in damage to instructional materials, toys, athletic equipment, furniture, and the physical plant and grounds. In addition to the obvious problems of the high cost is the decreased likelihood that individuals involved in these behaviors will benefit from ongoing training programs. The right of other residents to ongoing training and the assurance of their health and safety can also be jeopardized making the reduction of property destruction a high priority.

High frequency incidents of property destruction easily observable by staff may be amenable to modification using positive practice overcorrection, (Foxx and Azrin, 1975; Foxx and Azrin, 1973), as well as mild aversive consequences such as contingent placement in a quiet area. More surreptitious low frequency incidents may not be as easily modified yet may pose a serious problem due to their intensity. In fact, overcorrection techniques require numerous repetitions over a span of several months to prove effective and may drive the behavior underground. This would not be cost effective and may deny residents the right to ongoing training and effective treatment of their behavior problems.

The technique of forced practice is proposed as a method of increasing the effectiveness of overcorrection procedures and other aversive consequences which require both: (1) frequent repetitions over long periods of time; and that (2) the individual be caught in the act of misbehaving. It is potentially useful with surreptitious, low rate, high intensity behaviors such as various forms of property destruction and self-abusive behavior. Forced practice requires the individual to physically rehearse the misbehavior repeatedly. After each behavioral trial a consequence is applied. For example, a resident who stuffs inappropriate articles down the toilet may be required at prearranged times

during the day to repeatedly rehearse stuffing articles in the toilet. The resident would be physically guided through the behaviors of stuffing; then be required to restitute by removing the articles; and then be immediately consequated in some reasonable manner such as mopping the surrounding floor area for a fixed interval of time. This behavioral sequence would then be repeated.

METHOD

Subject and Setting

A deaf, profoundly retarded 20 year old male resident of a state facility for the retarded participated. He had been institiutionalized since age 5 at a variety of residential settings. He has a history of maladaptive behaviors, i.e. physical aggression to people, pica, property destruction. These behaviors were under control when he was a resident on a small highly structured behavioral unit using a combination of close supervision, environmental manipulation and consistent behavior programming. With a pattern of care change he was placed on a larger unit with a smaller staff to resident ratio. The purpose of the change was to move away from an emphasis on behavior towards more social skills training by grouping residents with their social peers. Individualized supervision was not possible. One form of property destruction became extremely problematic with his relocation, specifically, ripping mattresses. The cost in dollors and cents was approximately $100.00 per day and caused two residents to literally be without beds.

His behavioral pattern is compulsive and ritualistic in nature. He is also quick and surreptious in his behavior. Staff were unable to reliably catch him in the act of ripping mattresses and therefore he was not consequated using the non-physically aversive procedure of being physically restrained in a prone position until calm for 2 minutes with sufficient repetition to prove effective.

Data for the eight weeks prior to the baseline phase is as follows (i.e. WK 1, 2X; WK 2, 2X; WK 3, 3X; WK 4, 4X; WK 5, 2X; WK 6, 7X; WK 7, 9X; WK 8, 9X). A time-out from positive reinforcement procedure for 10 minutes plus 10 seconds calm was used for this behavior prior to the planned physical restraint with little success. In order for these consequences to have been effective staff would have had to catch him in the act of ripping the vast majority of time. The cost would have been too great and the likelihood of these consequences being effective even then would not be high in terms of extinguishing the behavior. Therefore a forced practice procedure was proposed whereby it could be assured that he would exhibit sufficient repetitions of the behavior to make an aversive consequence highly successful in a short period of time. The alternatives to a forced practice training procedure would have been one-to-one staff supervision which the Center simply could not afford to provide or highly restrictive mechanical restraints. Both of these alternatives would be preventive in nature and not actively therapeutic.

The use of these procedures was reviewed and approved by the residents' interdisciplinary team; physician; an internal behavior modification committee; his parents; local human rights committee; state appointed advocate; and the Director of the institution.

Procedure

For purposes of this training program only the behaviors of attempting to rip mattresses and actually ripping mattresses were targeted. The resident participated in training sessions held every Monday, Wednesday and Friday for 5 weeks, 3 sessions scheduled per day. A total of 45 training sessions were conducted. All sessions were conducted by the unit psychologist with the assistance of two developmental aides. The unit team leader was also trained as a back-up to the psychologist. Sessions lasted approximately 8 minutes each. A

room previously designed for time-out served as the setting for these intensive behavior training sessions. Each session consisted of ten independent trials. Each trail consisted of the resident being physically guided through ripping a mattress. The same mattress was used numerous times. Immediately following the ripping the psychologist signed "no" and simultaneously squirted the resident with a diluted solution of water and tabasco sauce (1 part tabasco to 12 parts water mixed by the Center pharmacist) from a plant mister aimed at the facial cheeks no closer than 6 inches. This procedure was repeated for a total of 10 trials.

The resident was squirted on an ongoing basis on the unit for each incident of ripping. The program was designed such that when the cumulative frequency of his ripping outside the sessions reached 2 incidents, the frequency of squirts both in the training sessions and out was increased to 2 per trial. When the cumulative frequency of ripping on the unit reached 4 incidents the number of squirts per trial both in the high intensity training sessions and on the unit was raised to 3 squirts. A similar mechanism was in place to reduce the number of squirts per trial. For each week in which he was 100% free of ripping the frequency of squirts per trial was reduced by 1 squirt both in the sessions and on the unit.

Following the five weeks of intensive behavioral training a 3 month follow-up phase began whereby he was squirted on an ongoing basis by unit staff per incident of ripping or attempting to rip mattresses. The frequency at which he was squirted on the unit per incident was the same as the frequency at which he was squirted per trial during the last day of intensive behavioral training. The frequency at which he was squirted per incident was reduced by 1 squirt for each week the frequency of his ripping and/or attempting to rip was zero; however, never going below 1 squirt per incident. The follow-up phase was designed to terminate should the resident be free of ripping for 6 consecutive weeks.

In addition to the restrictive training procedures the resident's program included a full day of special education classes and unit based training in the areas of self-help skills and speech-language programming to develop his signing skills. He also participated in a minimum of 3 non-contingent one hour sessions per week of sensory stimulation and had the opportunity to earn 6 edible snacks per day for not exhibiting the targeted behaviors. Additionally he received social rewards on an ongoing response contingent basis for appropriate behavior. He was checked at least 3 times per week by medical personnel at the Center to ensure his health and safety.

RESULTS

Figure 1 depicts the four phases of the treatment program: (1) baseline recording; (2) high intensity behavioral training; (3) follow-up behavior training; and (4) long term follow-up. There were 7 incidents of mattress ripping during the first week of high intensity training and correspondingly the number of squirts per trial was increased from 1 to 2 to 3. The frequency of squirts per trial in the sessions and frequency of squirts per incident on the unit remained at 3 for the duration of high intensity training. This initial reduction in the resident's ripping behavior (see figure 1) during week 1 was followed by a dramatic drop in the behavior during week 2. The behavior escalates slightly and plateaus during weeks 3 and 4; and is reduced to zero frequency during week 5 of high intensity behavioral training.

The resident's frequency of ripping mattresses remained at zero for 6 consecutive weeks during the follow-up phase (see figure 1). Staff monitored his behavior during this period and were prepared to squirt him, 2 squirts per incident during the first week and 1 squirt per incident thereafter should he have exhibited the targeted behaviors. Continued monitoring of this resident's behavior indicates that he has had no subsequent incidents of ripping for 24

weeks following termination of the 6 week follow-up phase. This long term follow-up represents a return to the baseline condition: behavior is consequented on a response contingent basis by a planned physical restraint until calm for 2 minutes (see figure 1). The data represents a sustained 100% decrement in the targeted behaviors. There was some symptom substitution noted following the 6 week follow-up phase, specifically, the resident ripped the tongues out of the shoes of other residents. This behavior was brief, lasting only a few days and extinguished itself.

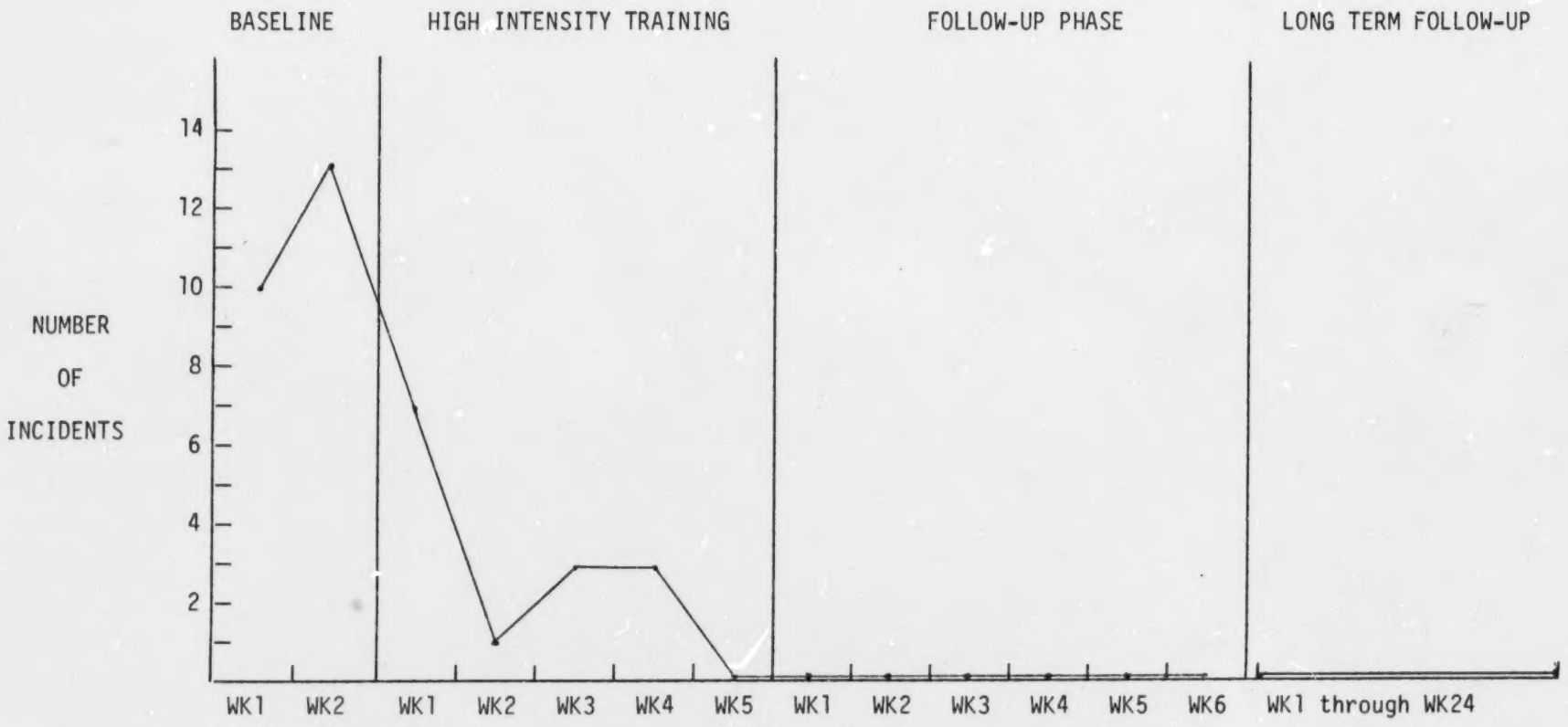
DISCUSSION

Results indicate that forced practice behavioral training using an aversive consequence can be effective in programming low frequency, high intensity, surreptitious behavior. Although the program used has multiple components the positive reinforcement procedures (Special Education Classes, self-help skill training, language training, DRO snack reinforcement, social reinforcement for pro-social behavior, and non-contingent sensory stimulation sessions) were all in place during the baseline phase suggesting a direct effect from forced practice training with tabasco squirting. As a validity check during the follow-up phase and long term follow-up no ripped mattresses were discovered on the unit suggesting that the resident was not engaging in this behavior surreptitiously.

Possibilities exist for further research with this technique using behavior other than property destruction such as self-abuse. For applications with self-abusive residents care must be taken to have the individual rehearse the behavior benignly; not actually damaging himself in anyway. Forced practice is a potentially effective way of increasing the efficiency of positive practice overcorrection and other aversive consequences for high intensity low rate behavior. This technique allows for more frequent repetition of behavior

and consequence; provides a more immediate pairing of behavior and consequence; and lessens the risk of simply driving the behavior underground. Less restrictive treatment alternatives should always be considered. In this study there was sufficient data-based justification for the use of a physically aversive stimulus since systematic attempts with non-aversive techniques (i.e. time-out with positive reinforcers; planned physical restraint with positive reinforcers) proved ineffective. With surreptitious behaviors it must be clearly established without a reasonable doubt that the individual is indeed committing the behavior for which he is being consequated.

Figure 1


BASELINE
HIGH INTENSITY TRAINING
FOLLOW-UP PHASE
LONG TERM FOLLOW-UP
NUMBER OF INCIDENTS
14
12
10
8
6
4
2
WK1
WK2
WK1
WK2
WK3
WK4
WK5
WK1
WK2
WK3
WK4
WK5
WK6
WK1 through WK24
Behavior is consequated on a response contingent basis by a planned physical restraint until calm for 2 minutes
Forced practice training sessions using increasing amounts of tabasco squirting
Behavior is consequated on an ongoing response contingent basis by tabasco squirting
Return to baseline condition: Behavior is consequated on a response contingent basis by a planned physical restraint until calm for 2 minutes

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